



STATE OF MAINE

# DEPARTMENT OF ENVIRONMENTAL PROTECTION

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GOVERNOR

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COMMISSIONER

February 17, 1998

Mr. Emil Klawitter  
Code 1823 EK  
Department of the Navy, Northern Division  
Naval Facilities Engineering Command  
10 Industrial Highway, Mail Stop 82  
Lester, PA 19112-2090

Re: 1996 Annual Report, Monitoring Events 5 through 7,  
for Sites 1 and 3 and Eastern Plume

Dear Emil;

The Department of Environmental Protection (DEP or Department) has received and reviewed the report entitled "Final 1996 Annual Report, Monitoring Events 5 through 7, Sites 1 and 3 and Eastern Plume, Naval Air Station Brunswick (December 1997)" prepared by EA Engineering, Science, and Technology. Based on that review the Department has the following comments and issues.

## Specific Comments:

### 1. Eastern Plume, Section 2.1.2, Page 2-1:

"The Eastern Plume has been attributed to past solvent disposal practices from Site 4 (the Acid/Caustic Pit), Site 11 (former Fire Training Areas), and Site 13 (Defense Reutilization and Marketing Office Area), which have impacted ground water."

The text states that the Eastern Plume has been attributed to past solvent disposal practices from Site 4, Site 11, and Site 13. However, the current monitoring program does not include any monitoring wells from within the source areas of the three sites. There are approximately 20 monitoring wells at sites 4, 11, and 13. Monitoring results from these wells will greatly improve the understanding of contaminant migration from the potential sources. What does the Navy propose based on their geostatistical assessment for the long term monitoring within these sites?

### 2. Tables 2-2 and 3-3; Figures 3-1 through 3-19E:

MW-233R is presented as a deep well on Table 2-2. MW-233R is not shown on Figures 3-1 through 3-19. However, wells MW-233 and MW-211B are presented on Figure 3-1, but are not identified on Tables 2-2 or 2-3. Table 3-3 presents the sampling schedule for MW-233R and MW-211B, but does not present any schedule for MW-233. The subject tables and figures need to be corrected to correctly identify the wells being monitored, the schedule, and the strata targeted for each well.

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AUGUSTA  
STATE HOUSE STATION 17  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826  
OFFICE LOCATED AT: RAY BUILDING, HOSPITAL STREET

PORTLAND  
312 CANCO ROAD  
PORTLAND, ME 04103  
(207) 822-6300 FAX: (207) 822-6303

BANGOR  
106 HOGAN ROAD  
BANGOR, ME 04401  
(207) 941-4570 FAX: (207) 941-4584

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, ME 04769  
(207) 764-0477 FAX: (207) 764-1507

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3. Direct Push Sampling Program, Page 3-13:

"Direct-push sample locations are show on Figure 3-25."

Figure 3-25 is not included in report.

4. Perimeter Wells , Section 3.3.3.3 Page 3-14.:

"Perimeter monitoring wells at Sites 1 and 3 and Eastern Plume include MW-230A, MW-231A, MW-231B, MW-318, MW-313, MW-311, MW-309A, MW-309B, MW-303, and MW-305."

Perimeter Wells are those wells that are on the perimeter of the plume which help define the plume boundaries. Wells that exceed the Maximum Exposure Guidelines/Maximum Contaminant Levels (MEG/MCL) can not be considered perimeter wells. Therefore, MW-311 must be removed from the perimeter well list. Additionally, the Navy needs to address the need for new perimeter wells or further characterization of the plume in the vicinity of MW-311.

5. Frequency of Analytical Detections in Ground Water, Section 3.3.3.4, Page 3-14:

This section does not seem relevant and should be removed from the document.

6. Recommendations, Section 4.6, Page 4-9:

"Recalibrate the numerical model of the Eastern Plume using water elevation data collected during 1997 to assess the overall effectiveness of the groundwater extraction will network..."

The recommendation to recalibrate the numerical model of the Eastern Plume is not justified. It is the Department's understanding that ABB-ES was unable to recalibrate the model based on the pump test data. It was apparent that additional site specific data on the stratigraphy, chemistry, and hydrology would be required before the model could be calculated. Additionally, the model would need to be updated with additional layers to account for the complexities in the stratigraphy. Instead of using the Navy's money to recalibrate the model, the Department recommends that the Navy install additional wells near MW-311, and include the wells at sites 4, 11, and 13 in the monitoring program.

The Navy should supply the statistics associated with the model recalibration allowing the Department to assess the accuracy of the model.

7. Recommendations, Section 4.6, Page 4-9:

"Reduce the frequency of surface water sample analysis for the presence of VOC by EPA method 8260 from tri-annual to annual...."

The recommendation to reduce the frequency of surface water sample analysis for the presence of VOC from tri-annual to annual is not recommended at this time. The remedial activities at Sites 1 and 3 were completed in June 1996. Only one sampling round has been completed since the remedial activities were completed. Therefore, additional sampling will be required before the frequency can be altered. However, the Department would agree to reduce the compound list to those that have been detected in the groundwater at Sites 1 and 3 since 1994.

8. Recommendations, Section 4.6, Page 4-9:

"Remove analysis of tentatively identified compounds from the LTMP samples..."

The recommendation to remove the Tentatively Identified Compounds (TIC) from the Long Term Monitoring Plan (LTMP) samples requires additional data presentation. This report did not discuss the detection of any TICs from any of the samples. The Navy will have to prepare a document that addresses the detection of TIC and a discussion of the justification for removing the TIC from the LTMP samples. The continued assessment of the TICs for the presence of compounds may ultimately support the Navy's recommendations of Natural Attenuation at these sites.

9. Recommendations, Section 4.6, Page 4-10:

"Perform a geostatistical assessment of the Eastern Plume to determine the need for continued sampling at wells which have historically reported non-detect VOC concentrations and to identify areas of the Eastern Plume where low confidence levels in ground-water VOC concentrations isopleth exist."

The Department agrees with the recommendation for a geostatistical assessment of the Eastern Plume data. However, the data must be reviewed to determine if sufficient data has been collected to allow the use of non-parametric statistical calculations.

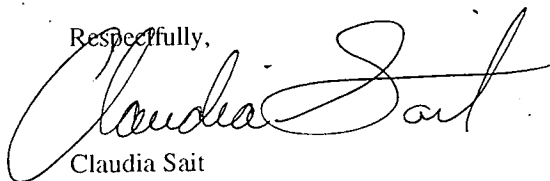
10. Recommendations, Section 4.6, Page 4-10:

"Initiate discussion on data requirements for evaluating the applicability of natural attenuation within the Eastern Plume and assess whether natural attenuation is a viable long-term remedial strategy for reducing concentrations of VOC to applicable or relevant and appropriate requirements in ground water."

The DEP has agreed to allow the evaluation of natural attenuation in the past, however the DEP would require the Navy to use the protocol for implementing intrinsic remediation proposed by the Air Force Center for Environmental Excellence and the USEPA. This will require the addition of many parameters to the monitoring program. It will also require a better characterization of the potential source areas, and additional wells in the vicinity of MW-311.

Please feel free to call me at (207) 287-7713 if you have any questions or comments regarding this matter.

Respectfully,



Claudia Sait  
Project Manager-Federal Facilities  
Bureau of Remediation & Waste Management

cf: File  
Peter Nimmer-EA  
Jeff Brandow-ABB-ES

Richard Heath -DEP  
Susan Weddle-BACSE  
Jeff Dale-USN

Mike Barry-EPA  
Jim Caruthers-NASB  
Carolyn Lepage